Chapter Seven

An After Action Assessment

At the close of hostilities in Europe, General Weyland could look back on the preceding nine months and eight days with great satisfaction. In the euphoria of victory, he told his officers and men that the XIX TAC-Third Army team had brought "air-ground cooperation to new heights of combat efficiency and beaten the enemy at every turn." The air commander was right. Through four challenging campaigns, Weyland's tactical air forces demonstrated the soundness of their organization and operations, as well as their ability to minimize the limitations of air power.

During the first campaign in France, the command proved tactical air forces both operationally mobile and capable of employing new and effective tactics such as responsive cover to armored forces. At the same time, the pace of the ground advance and competing priorities prompted Weyland to conduct extremely decentralized operations on widely separated fronts. Attacking every challenge, his forces found it difficult to concentrate with sufficient force against the enemy in eastern France because of commitments 300 miles away in Brittany, where a large fighter-bomber force confronted heavily fortified port facilities, targets long considered unsuitable for fighter-bombers in close air support operations.

The battle in France provided Third Army and the XIX TAC the opportunity to mold a first class fighting team. After besting the enemy, the airground team entered the inhospitable region of Lorraine to confront a very different situation. Here, static warfare characterized by stiff defenses, bad weather, and serious materiel shortages hobbled tactical air power's key advantage: the ability to swiftly concentrate forces against targets. Although proximity to the front eliminated many problems presented earlier in France, Weyland's forces, under conditions similar to those of World War I, proved unable to blast a path for Patton's army through the Siegfried Line. If Weyland appeared overly optimistic about the capabilities of his air arm at the outset of the Lorraine Campaign, he soon realized that his light tactical aerial force required help from medium and heavy bombers to crack the Siegfried Line.

Inexorably, the challenge of operating in Lorraine compelled closer joint planning between air and ground force officers to use their limited resources to maximum advantage. This proved to be one of the central developments in air-ground cooperation. Responding to Lorraine's challenges, Weyland and his



P-47s with occupation stripes during the postwar period

fellow officers adopted a flexible approach in solving problems associated with the three tactical mission elements—air superiority, interdiction, and close air support—prescribed by AAF doctrine. Weyland, however, neither abandoned doctrine nor operated with absolute control of his forces outside the framework of established Army structure. His treatment of doctrine as a guide rather than as dogma merits praise. Flexibility rather than rigid priorities became the major ingredient of successful tactical air operations in Lorraine and would come to characterize the entire campaign in Northwest Europe.

In the Ardennes Campaign, the third major operation for the XIX TAC, tactical air power came closest to affecting enemy movement by itself. Assigned a counterattack role, General Weyland showed that, with sufficient forces, tactical air power could rapidly concentrate to first blunt and then help repel a powerful enemy assault. His forces achieved this in spite of weather delays, a small night fighter force, and heavy enemy flak defenses. At the same time, Ninth Air Force units slowly, but effectively, isolated the Ardennes battlefield from the German supply base.

The final offensive, which carried the Third Army–XIX TAC team through the Siegfried Line and into Germany, combined elements from earlier mobile and static operations. Here, Weyland's experienced forces continued to improve procedures for better reconnaissance and air-ground coordination, relying more extensively on decentralized command and control arrangements. Strongly supported by ground logistics elements, XIX TAC pilots showed that air power had become an effective and important ingredient in propelling and maintaining the Third Army's offensive momentum.

Considering XIX TAC's achievements in four major campaigns, it remains difficult to measure the effectiveness of tactical air power with precision. Postwar evaluators concluded that air power successfully achieved and maintained general air superiority and isolated the battlefield effectively from

enemy aircraft, but without sufficient night fighters, it was somewhat less effective if measured in terms of preventing resupply. They also declared—perhaps over enthusiastically—that close air support operations were "individually and collectively, both deadly and decisive in their effectiveness."²

Beyond these general assertions, the basic question remains one of determining how to accurately judge the contribution of tactical air power in specific campaigns or battles. In the Ardennes, for example, air power certainly played a key if not decisive role in blunting the German drive in the Bulge area and later in isolating the battlefield through intensive interdiction operations. It is also possible to point to air power's support in specific bridgehead operations, such as XX Corps' desperate fight to hold its Saarlautern bridgehead in the Lorraine Campaign. During mobile operations, tactical air power also helped generate momentum and permit greater tactical mobility. Yet a more precise attempt to measure performance in these operations invariably raises the problem of using statistical or equivocal evidence and argument.

As with other commands in the European theater, XIX TAC had a statistical control section that kept a running account of aircrew and aircraft performance. Although its records provide useful data about the command's operations, when applied to performance or effectiveness such data must be interpreted with caution. Further obscuring the issue, little or no distinction is drawn between operational effectiveness and operational efficiency. Efficiency can be measured precisely in terms of sortic rates, accident statistics, quantity of bombs dropped, and other operational categories. Efficient operations, however, may not necessarily be effective operations. Effectiveness should be evaluated from the standpoint of air power's impact on the enemy, which is usually subjective and unquantifiable, thus beyond the pale of assured statistical analysis.

Did the XIX TAC become more efficient over the course of the campaign? One might assume so, but the record is unclear. For example, during the three months from February–April 1945, the command averaged an aircraft abort rate of 2.8 percent of all aircraft dispatched. Although this represented the lowest figure for any three-month period, much of the difference resulted from the relatively few flight cancellations in the spring because of improving weather. On the other hand, a comparison of August 1944 and March 1945, the two months of mobile warfare with the most sorties flown, shows the command with a one-third lower aircraft abort rate in March. In this case, the command cited mechanical problems nearly 70 percent more often in August, only 60 days after D-Day, than it did in March 1945. Although improved logistics and aircraft maintenance practices likely made the command more efficient by March, this cannot be determined from command maintenance reports or available statistical evidence.³

Not surprisingly, the issue of aircraft accidents also turns on weather conditions. During March and April 1945, the command averaged the low figure of one operational accident per 100 flying hours. While the two-month

average suggests efficient operations, the low number represents the result of better flying weather in the spring, not the culmination of a steady trend. In fact, during comparably good weather in August and September 1944, the statistics show a lower accident rate. As expected, the accident rate remained consistently higher during the winter months.

Similarly, statistics for aircraft losses point to February, March, and April 1945, as the XIX TAC's best months. Their average of 5.2 aircraft lost per 1,000 sorties was significantly lower than comparable figures for the previous summer. Weather proved much less of a factor in this instance. Although the winter months show a higher loss per sortie ratio, the low figure also reflects the more intense flying associated with the Ardennes Operation. Cautiously, one might conclude that pilots proved themselves more efficient under mobile warfare conditions in the spring of 1945, than they did in similar circumstances the previous summer. Nevertheless, comparisons are difficult given the many variables, and the statistical evidence can only be suggestive.

Measuring operational effectiveness in terms of target destruction is much more challenging because this data is difficult to correlate with specific enemy action, especially when the data itself is not always verifiable. Indeed, most of what the command termed battle or bomb damage assessment information came from pilot reports that normally could not be substantiated. Even the clearest examples are difficult to interpret with precision. In March 1945, for example, XIX TAC claimed 267 enemy planes destroyed which, up to that point, had been exceeded only by the August 1944 figure of 293. Then, in April 1945, the command's claims skyrocketed to 1,703! Likewise, in April it reached an all-time high of 24,634 ground targets claimed as destroyed, damaged, or probably destroyed. What do the figures mean? Even though the numbers cannot be confirmed, they do not seem wholly unrealistic in view of the enemy's condition late in the spring. However, it remains difficult, if not impossible, to determine the specific impact of these losses on the German forces. They demonstrate only that command pilots operated efficiently and attacked an all-but-defeated enemy at will.

General Weyland confronted the issue of pilot reporting accuracy early in the campaign, but it remained a controversial subject throughout the nine months of operations. From his standpoint, critics questioned the integrity of his pilots on the basis of unreasonable reporting expectations. The issue became a subject of major concern throughout Ninth Air Force in the winter of 1945. In early February, SHAEF planners expressed concern about the accuracy of fighter-bomber claims of armored vehicles destroyed during the Ardennes Campaign. Understandably, the planners found it difficult to design operations against an enemy whose strength in armor either had been eliminated or could not be verified. Despite the fact that General Vandenberg responded immediately by affirming the "almost impossible task of obtaining accurate confirmation of our claims by actual count in captured or overrun ter-

ritory," he asked his tactical air commanders to report on their approach to the problem.⁴

In his response, General Weyland reviewed current reporting directives and the measures his pilots and intelligence officers took to encourage the greatest possible accuracy. In fact, he argued, his command's emphasis on objective reporting resulted not only in the most accurate claims possible in light of "inherent difficulties," but in conservative figures as well. For example, because of the earlier practice of claiming half-tracks along with armored vehicles, he directed his pilots to claim "no results observed" when they bombed concealed armor concentrations in woods, even when they observed smoke rising from the target area afterward.⁵

Weyland identified the inherent difficulties of all claims reporting. Investigation on the ground, he reminded SHAEF, had been unable to distinguish between armor destroyed by air or ground action or by enemy demolition. Moreover, the enemy worked an impressive salvage system that would distort claims. Finally, information gleaned from POWs seldom proved credible. Weyland argued that:

[t]he credibility of P/W [prisoner of war] statements is doubtful and, although a thorough study has been made of all available P/W reports of the effect of air action on tanks and armored vehicles so many discrepancies have existed that again neither conclusive proof nor disproof of claims has been forthcoming.⁶

Weyland concluded by referring to ground forces that "take credit for...vehicles that were actually knocked out by air attack." In this instance, he told his staff that General Patton "stated informally that as 3rd [sic] Army advances, they also claim the tanks and vehicles destroyed by [fighter-bombers]." If this had no bearing on the veracity of air claims, he said, it nevertheless made it difficult for SHAEF planners to maintain accurate estimates for enemy armored forces. In the end, authorities must accept the integrity of the claims or conclude that his pilots were "deliberately falsifying" them. For Weyland, the latter was unthinkable.⁷

General Quesada agreed. His command analyzed various factors that would influence an accounting, including smoke and fire in the target area, aircraft performance, and the diversity of weapons used. It determined that pilot claims were "not excessive, but if anything...underestimates of the actual damage inflicted." Significantly, Quesada's report argued that the major problem involved the reporting system itself, which required accurate numbers under all circumstances. The IX TAC recommended that the planners forego their insistence on numbers and be willing to accept estimates and agree to a pilot confidence factor for accuracy. This did not happen. The problem of air-

crew reporting accuracy serves as a useful reminder about the tyranny of numbers. The predilection for specific numbers as the standard for combat effectiveness proved as fallible in the Second World War as it did a generation later in the Vietnam conflict. Even then, bomb strike cameras did not end the difficulty of verifying aircrew claims.

In the final analysis, ground forces are often the best judge of tactical air power's effectiveness. In response to an AAF Evaluation Board questionnaire, army officers agreed that fighter-bombers consistently assisted ground operations, even when bad weather forced them to fly interdiction missions beyond the army's front line positions. General Walker, XX Corps commander, wrote General Weyland in mid-April 1945, that "without your efficient and well planned operations we would have suffered far greater casualties and taken a much longer time to reach our objectives." He did not need statistical evidence for his conclusion; with the assistance of General Weyland's aircraft he was there and had seen his ground forces achieve their objectives.

If it is fair to conclude that tactical air power proved effective in Northwest Europe, the question of its decisiveness remains to be considered. Might air power have achieved more decisive results if it had been employed differently in that locale? General Quesada, for one, thought that a massive, long-range fighter-bomber assault on key strategic targets in the German homeland during the winter of 1944–1945 would have brought Germany to her knees. Others have suggested more conventional proposals, such as more efforts devoted to interdiction or close air support.¹¹

The question of air power's decisiveness relates to the army's effectiveness. One authority has argued that military leaders created an "army of mobility at the expense of power." Materiel superiority, for example, did not translate into heavy firepower and better equipment to confront the *Wehrmacht's* lumbering Tiger tanks and 88-mm flak/antitank guns. Paradoxically, while leaders committed the U.S. Army in Northwest Europe to "a power-drive strategy of head-on assault," they did not use its mobility to create offensive concentrations rapidly, preferring instead the broad-front approach in its advance on Germany. Consequently, the war may have been prolonged.¹²

Might tactical air power have been used differently and concentrated at crucial points like the Seine and Rhine rivers to prevent sizeable German forces from escaping? General Weyland certainly did not oppose the idea. After all, doctrine prescribed this application and he relished the opportunity to show off air power's ability to concentrate forces to secure an objective. At the same time, his command could seldom expect decisive aerial results in major battles because of competing air priorities and various operational restrictions, such as foul weather. Tactical air power, like air power in general, was first and last a supporting or, as air leaders increasingly referred to during the last years of the war, a cooperating arm of the airground team.

There is every indication that the U.S. Army relied on tactical air power to provide extra firepower and to shield ground forces. General Bradley said as much in his postwar report on air power. In a letter to General Spaatz, he asserted:

I know that I do not need to tell you the tremendous importance which I have attached to tactical air co-operation for my armies. In this campaign, the recurring process of massing our divisions, forcing a breakthru [sic], and the subsequent exploitation of our mobility to encircle and defeat the enemy demanded almost complete air superiority to overcome our sensitiveness in supply, reserves, and the necessity for full use of road and rail communications.¹³

He might also have added that the U.S. Army had been structured in this way precisely to allow for tactical air power's additional firepower. Similarly, air superiority may have produced an overdependence by the army on air power at the expense of ground action. During the North African Campaign, General Eisenhower warned against the negative effects of an air umbrella on ground forces. Although air leaders pointed out that tactical air forces represented a limited asset, the division commander, blessed with close air support on most good-weather days, might not agree. As the campaign progressed, it is fair to question whether the ground forces depended on unnatural levels of air superiority. A few years later, more limited wars in Korea and Vietnam would also be characterized by Allied air superiority—and perhaps an over-reliance on air power as a substitute for ground firepower.

General Patton, hailed as a proponent of mobile rather than positional warfare, emerged in World War II as the Allied commander most likely to produce swift, decisive military results. The Ardennes Operation to relieve Bastogne represents one demonstration. Yet, for the most part, until late in the war the Third Army moved on a secondary front in the theater. It is tempting to speculate whether the XIX TAC—Third Army team, if given higher priority in forces and supplies, might have carried out the concentrated offensive and bold exploitation of position as urged by Patton, with a resultant shortening of the European war. In any event, tactical air power was, as always, intimately connected with the Army's objectives and plan of advance. Tactical air forces appeared, in that sense, only as capable as their ground counterparts.

The success of tactical air power well-employed in the European campaign was made possible by the timely convergence of four important developments: (1) the maturation of tactical aviation doctrine; (2) effective organization and procedures; (3) a technical revolution in equipment, and above all; (4) the presence of pragmatic men of goodwill who made the system work. General Weyland typified the practical leader who came to dominate tactical

air operations in the European theater. At no time in his day-to-day operations during the campaign in Europe did Weyland adhere formally to FM 100–20 or any other War Department declaration regarding tactical air power doctrine. This did not mean that the XIX TAC commander ignored aerial mission priorities. Rather, he relied on a practical approach to the employment of tactical air power and a solid relationship with army officers. Using doctrine as a loose guide and not an inflexible dogma, Weyland addressed each situation in terms of its demands. A pragmatist by nature, he would not need to wave an AAF flag or FM 100–20. Mutual trust, respect, and a close relationship with General Patton and other Third Army leaders meant that Weyland never had to resort to formal doctrinal pronouncements to support his position on questions of employing tactical air assets. Moreover, because the Allies possessed general air superiority—their number-one air objective at the start of land combat on the continent—attention could be devoted to conducting armed reconnaissance/interdiction and close air support operations in much the way Weyland and his XIX TAC planners intended.

In view of Weyland's conduct of air operations throughout the campaign, it appears surprising at first to find him in the immediate aftermath of the war reaffirming the importance and doctrinal validity of Command and Employment of Air Power (FM 100-20 of 1943). The experience of his command through nine months of intensive air operations in collaboration with General Patton's army, he said, showed the manual's concepts "to be basically sound." He declared that XIX TAC followed the order of priority prescribed by the manual when planning and flying combat missions. First in importance was the achievement of air superiority and measures taken to maintain it. Next came interdiction or isolation of the battlefield. "Close air cooperation with ground units in combat" completed the triumvirate. Mindful of his audience, senior airmen, Weyland carefully used the words "cooperation with" in place of the earlier phrase, "support of" Third Army. Looking ahead to institutional independence, AAF leaders had become especially sensitive over any connotations that might reflect subordinate status, and Weyland well understood the need to validate FM 100-20, especially in terms of command arrangements. Postwar politics seemed to be a driving force for many airmen involved with evaluating their wartime experiences. Nevertheless, whatever Weyland felt about the manual, in practice he, like many others, proved anything but a servant of rigid doctrine or its prescribed order of mission priorities.¹⁴

In response to a request from the AAF Evaluation Board assigned to the European theater in the summer of 1944 to study the role of air power, General Weyland compiled a report on combat operations of the XIX TAC. In early 1945, the War Department directed the AAF Evaluation Board to focus on the effectiveness of close-in air cooperation, what the board termed Phase III operations. In March 1945, the board solicited responses from Ninth Air Force, the First Tactical Air Force, and from the ground units to a 39-point questionnaire.

Although many individual units replied well before the end of hostilities, Generals Bradley and Devers submitted their views together in mid-May. The board issued its Phase III report in August 1945. Meanwhile, during the previous month General Bradley and his 12th Army Group Air Effects Committee used much of the information from the questionnaire to prepare their own report, *The Effect of Air Power on Military Operations*. Along with the reports from General Weyland's command, these two major studies provide a comprehensive analysis of tactical air doctrine and operations in the European theater during World War II.¹⁵

These postwar evaluation reports show that army commanders in the theater understood and appreciated the importance of air superiority. If the questions asked of them seemed weighted toward a validation of FM 100–20, they nevertheless provided candid answers that reflected most ground element leaders' views on the important issues surrounding the use of tactical air power. Although officers at Headquarters Army Ground Forces in Washington in late 1945 might challenge the assertion that supremacy in the air must be a prerequisite for successful ground operations, officers leaving the field in Northwest Europe had no such doubts. In the words of the AAF Phase III report, "too much emphasis cannot be laid on the advantage to the Allied cause of having virtually unchallenged supremacy in the skies above the European continent throughout the campaign." 16

Army leaders knew that air superiority provided their forces nearly unrestricted movement and unhindered resupply on the battlefield. Free from significant enemy air attack, ground forces could, among other activities, regroup rapidly, maintain uninterrupted supply channels, and devote less attention to camouflage and air defenses. Moreover, Army leaders did not have to worry about the morale of their troops who surely would have suffered as did their German counterparts under heavy, consistent aerial assault. Indeed, the ground forces overwhelmingly concluded "air superiority can and must be the first priority task, not only of the air forces but of all military and economic forces which are directing their efforts to final victory." ¹⁷

General Weyland agreed completely that air superiority was essential for success on the ground. As the tactical air commander, he ensured local air superiority on Third Army's front, and he worked diligently in all four campaigns to carry out this function. Like his fellow pilots, he enjoyed nothing more than to report his command's success against the *Luftwaffe*. During the campaign, his forces devoted approximately 18 percent of their sorties to priority one, or air superiority requirements. This was slightly below the figures for his sister tactical air commands in Ninth Air Force. ¹⁸ It also fell well below the effort accorded interdiction and close air support, which amounted to 40 and 42 percent of all missions flown, respectively.

Even so, on several occasions General Weyland—and Ninth Air Force planners—seemed overly focused on the threat from a struggling *Luftwaffe*,

given the intelligence data available to them on the state of the enemy's air arm. This happened in the Lorraine Campaign and also in the Ardennes, during the last phase of the counteroffensive in January 1945. Although his Pioneer P–51 Mustang group flew the bulk of these counterair missions, his P–47 groups also flew bomber and transport escort and area cover missions. A good portion of these missions proved uneventful and might well have been more profitably flown as armed reconnaissance along known, highly-traveled, surface traffic routes. Weyland's actions are more defensible for the period before January 1, 1945, when Ultra and his reconnaissance pilots reported extensive *Luftwaffe* redeployment. After the New Year's Day raid, Ultra provided data on *Luftwaffe* movements away from the Third Army front along with relative inactivity for units that remained. As it transpired, the campaign showed that air superiority could be assured with Weyland's fighter-bombers and reconnaissance aircraft flying assigned interdiction and close air support missions.

The *Luftwaffe*, in fact, posed a consistent, albeit minor, threat only at night. Neither General Weyland nor any other air commander could entirely prevent enemy air attacks on friendly ground forces—or the isolated bombing of a friendly base. Once the XIX TAC command began its assault on remaining German airfields in April 1945, the nighttime threat became insignificant. Had it been otherwise, the Allies would not have dared reorient much of their night fighter force from defensive patrol to intruder interdiction missions. Allied air superiority allowed airmen to focus their attention on interdiction and close air support missions.

Army commanders also understood the value of interdiction, the isolation of the battlefield. Without referring specifically to air force doctrine, General Bradley concluded that interdiction did rank second to control of the air in terms of tactical air achievement. "The outstanding contribution of the fighter-bombers," he declared, "aside from helping to attain and maintain air superiority, was their continuous armed reconnaissance missions to isolate the battlefield to the front and flanks of the ground forces." ¹⁹

Once again, General Weyland would concur, although he might quibble, with the word continuous. The main problem he and his colleagues faced throughout the campaign was maintenance of a consistent interdiction program in the face of other demands. As the Lorraine experience showed, tactical planners, like their strategic forces counterparts at that time, at first had difficulty deciding on the right targets. Only well into the fall buildup facing the Siegfried Line did Ninth Air Force planners conclude that primary bridges represented absolutely the best targets to attack to disrupt all German surface transport, therefore rendering enemy resupply and defensive efforts chaotic. Bridges, however, proved extraordinarily difficult targets for fighter-bombers not only to hit, but also to bring down. Even when employed against targets judged proper for their use, bad weather could intervene to negate their effec-

tiveness. After the Normandy invasion, daylight armed reconnaissance missions forced the *Wehrmacht* to move supplies and personnel largely at night. During the long nights from late fall to early spring, a small tactical night fighter and reconnaissance force proved unable to detect and seriously disrupt enemy nighttime operations.²⁰

Factors other than bad weather, darkness, and a small night fighter force hampered General Weyland's flyers. Competing priorities made it next to impossible to concentrate his force sufficiently on armed reconnaissance targets to execute a continuous, fully successful interdiction plan in the short run. Even during the Ardennes Campaign when he commanded an eight-group force, interdiction sorties amounted to less than 40 percent of the command's effort. Nevertheless, General Bradley and the airmen were certainly correct in declaring that air forces eventually isolated the Ardennes battlefield. It is tempting to speculate whether reallocating aerial assets from priority one to armed reconnaissance missions—ad hoc interdiction—might have hastened Allied success. It seems unlikely. Given the problems that prevented airmen from mounting consistent interdiction programs, it is doubtful that additional interdiction sorties would have significantly altered the outcome. Allied experience with interdiction demonstrated that tactical air power represented neither an unlimited resource nor a decisive force in and of itself. Little has changed since the Second World War to suggest altering this basic assessment of the interdiction mission.²¹

The doctrine of the tactical air force's third mission, close air support, underwent the greatest change during the campaign. Air Force theorists considered aerial attacks on enemy ground forces in the contact zone to be the most difficult to mount because of the danger of striking friendly troops and the most expensive in terms of operational efficiency and in losses to enemy defenses. They also could be the least effective if employed against inappropriate targets, such as hardened defenses or dispersed troops. Traditional airmen wanted these targets reserved for army artillery. The test of a proper aerial target usually began with the criterion, beyond artillery range. Indeed, tactical air forces seemed destined to fight primarily beyond the immediate surface battle zone except in rare emergency conditions.²² All this had changed by the end of the campaign, largely because Allied air superiority provided the environment for pragmatic commanders like Weyland to adjust their techniques as circumstances warranted. Although the number of sorties do not represent priorities in all cases, clearly air superiority in the Northwest Europe campaign and improved communications and air control practice resulted in an unforeseen emphasis on close air support missions, missions that often operated in close proximity to Patton's troops.

The prominence of close air support missions flown in Europe during World War II, however, cannot be discerned in the AAF Evaluation Board's classic description of the air planning process, that is, the process that allocat-

ed air effort at the level of the army-tactical air command combined-operations center. Board members decided that tactical air-ground planners had actually allocated missions in the following sequence:²³

- 1. Special targets or escort missions directed by Air Force headquarters.
- 2. Requirements to maintain air superiority.
- 3. Armed reconnaissance to prevent movement of enemy supplies and troops into the battle area.
- 4. Armored column cover missions.
- 5. Army requests or close air support missions.

This idealized scheme, which purported to describe the actual planning of wartime air missions, doubtless confirmed long-standing army suspicions about what third-priority air support meant for its troops in future combat.

In practice in the field, General Weyland followed neither this nor any other established sequence. Indeed, he affirmed that XIX TAC covered armored columns first. The record suggests, however, that except in highly unusual circumstances, such as the fluid conditions in the Eifel, he also invariably provided air support for infantry divisions in combat. Weyland's experience suggests that perhaps the AAF's aerial allocation sequence was suspect from its conception. The determining factor for close support allocation became the rate of advance. For relatively stable situations, as occurred during much of the Lorraine fighting, Patton's artillery could and did handle most front line targets. That allowed Weyland's fighter-bombers to focus on armed reconnaissance. For mobile operations, on the other hand, close support requirements received top priority in the form of armored column cover and attacks on defended towns and strong points, with remaining aerial forces assigned armed reconnaissance routes after minimum air superiority requirements had been met. Again, Weyland's air planners adjusted the aerial effort to meet the requirements of Patton's ground offensive, not to satisfy doctrinal pronouncements or some other formal planning arrangement.²⁴

If the AAF Evaluation Board's description of the World War II air allocation process strains the credibility of army and air liaison officers fresh from the field, the board's claim that close air support of the army normally did not exceed *15 percent* of the tactical air forces available can be legitimately disputed.²⁵ This board figure is often cited as at least indicative of, if not the last word on, overall World War II close air support commitments. This is patently incorrect. One must look beyond the broad percentage of forces allocated and consider the actual number and percentage of sorties flown on close air support missions.

On these points, General Bradley's own report is much more revealing because it is based on operational summaries describing actual targets attacked. Significantly, among Ninth Air Force tactical air commands, only the XIX

TAC flew more close air support sorties than it did interdiction sorties during the campaign. It devoted 42 percent of its sorties to close air support and 40 percent to interdiction. The close air support and interdiction figures for General Quesada's IX TAC totaled 27 and 46 percent, respectively, and for General Nugent's XXIX TAC, they were 33 and 47 percent, respectively. In fact, armed reconnaissance outnumbered close support sorties for Weyland's forces only during the spring offensive following the Ardennes Campaign. Then, in the final drive through Germany, when the enemy facing Patton's armored columns became progressively weaker, Weyland felt free to shift priorities to armed reconnaissance targets and airfields. Is it any wonder that Patton considered Weyland his favorite airman? Or that ground force officers considered the Patton-Weyland relationship as something special?²⁶ If Third Army could claim 42 percent of XIX TAC aerial sorties at the front, close air support sorties for all three American armies together averaged 33 percent of the total sorties flown during the Northwest European campaigns. Although this figure is more than twice as high as the 15 percent allocation figure offered by Air Force advocates, it is far more realistic.

The most controversial aspect of close air support operations during the campaign concerned what airmen deemed proper targets for fighter-bombers. As a general rule, Army officers did not believe that tactical aircraft should avoid attacking targets within the range of artillery. Weyland agreed that targets within artillery range remained suitable for his aircraft in mobile operations, because artillery normally moved up slowly. Yet, army evaluators also believed close air support bombing necessary and effective in static operations, too. As General Bradley's analysis noted, aircraft with 500-lb. generalpurpose bombs and 250-lb. fragmentation bombs often proved more destructive than any artillery preparation using much less destructive warheads.²⁷ General Bradley also cautioned against rules of thumb that early in the campaign had excluded defended villages, for example. In winter, many villages were filled with troops and made excellent targets for fighter-bombers attacking, first with general-purpose bombs and napalm, and then strafing exposed personnel. He argued that targets should be examined from both ground and air points of view. This, in fact, is what occurred in the combined operations system, and by the spring of 1945 fighter-bombers attacked most front line targets routinely.

One target, however, seldom appeared on the airmen's target list. As General Weyland repeatedly stated, he did not consider fixed, well-defended fortifications appropriate targets for fighter-bombers. Was he wrong? Some Army officers thought so. As one explained:

[P]ill boxes under attack are always surrounded by troops in strong points who do not fall back in the pill box until the Infantry actually assaults. Air attack causes considerable

casualties amongst troops manning strong points outside pill boxes and materially reduces their will to fight. We understand that ordinary bombing will not destroy pill boxes, but we do consider pill boxes excellent targets.²⁸

Some AAF officers also might have rejected Weyland's argument, noting that analysis showed fighter-bombers loaded with 1,000-lb. bombs could have a better chance of causing major damage. Others pointed to the indirect effect achieved by attacking pillboxes and casemented guns in which fighter-bombers served to neutralize these emplaced weapons until advancing ground forces could overwhelm them. General Weyland remained unconvinced, granting exceptions only in emergencies. Bespeaking his opposition, XIX TAC aircraft reported only one pillbox attacked during the entire assault on the Siegfried Line from the end of January to February 25, 1945. In this case, Weyland's stubbornness might very well have interfered with useful air support. On the other hand, his aversion to this type of target did not prevent his fighter-bombers from striking nearly everything else German within the artillery zone.²⁹

In short, by the spring of 1945, close air support had devolved far beyond the stilted, theoretical confines of FM 100-20. Although the manual claimed Phase III operations to be the most expensive, most difficult to control, and least effective of all missions, in many instances operations in Northwest Europe proved otherwise. One is reminded that 1943's FM 100-20 emerged from the North African experience, where much of the time the Allies did not enjoy air superiority and often possessed few aerial resources. These conditions had changed markedly by 1944 and 1945. Moreover, improved technology in the form of radio communications and radar normally made possible effective control and coordination between ground controllers and fighter and reconnaissance pilots. As for cost, XIX TAC's experience suggested that armed reconnaissance and cooperation missions were equally expensive in terms of planes and pilots lost. Finally, the relatively high percentage of close air support missions flown for Patton's forces and other armies in the 12th Army Group suggests that air support of army forces within the artillery zone achieved good results—and not just in emergency situations. As an 11th Armored Division spokesman explained for the AAF Board:

From our point of view, these [cooperation] missions are easy to control, are inexpensive in so far as loss of friendly aircraft is concerned, and usually show profitable results. Losses to friendly troops as a result of this type mission when controlled by experienced air corps personnel are nil.³⁰

The record bears him out and suggests once again the fundamental importance of Allied air superiority.

Like other tactical air commanders, General Weyland took liberties with formal tactical air mission priorities when the situation warranted, which underscored his pragmatic approach to doctrine that characterized air-ground operations during the combat in Northwest Europe. In Weyland's hands, doctrine served the forces, rather than the reverse, and with air superiority, he could adjust priorities according to need rather than theory. Weyland and his fellow airmen, however, never compromised on one issue. Besides designating mission priorities, FM 100-20 dealt with authority and control of air resources. Control of air assets, it stated, should be centralized and their command vested in an Air Force commander. If aircraft were separated and attached to ground units, air forces would be used improperly, nor would it be possible to recombine and concentrate the force when necessary. The XIX TAC commander reacted swiftly and strongly to any perceived infringement of his control. Such incidents were few and quickly settled by General Weyland within local channels—with solid support from General Patton and his staff, if necessary.

If Weyland exercised the control he wanted during the last few months of the campaign, decentralized operations became the order of the day. In late February 1945, XIX TAC supplied a second VHF radio to corps tactical air liaison officers and authorized them a separate channel for more direct and efficient communication between reconnaissance aircraft, other liaison officers, and (by extension) the army corps fire-direction center. Now liaison officers could request and receive information directly from the reconnaissance aircraft overhead without first communicating with the tactical control center.³¹ This decentralization of control at the combat front preserved ultimate air force authority while providing the army corps its organic reconnaissance. Technology made possible this more efficient use of resources and General Weyland embraced it as long as his prerogatives remained unaffected. He always believed that the tactical air doctrine dealing with command and control, if applied effectively, would assure the army the support it needed. Air officers during a campaign might decentralize operations or massage mission priorities according to need, but they remained uncompromising in adhering to the principle that the ultimate control of air forces rested with air commanders. In postwar analyses, army officers also recognized and accepted the need for centralized control of air power, even if this point was appreciated more at the corps and army level than at the division level.

Tactical air doctrine also prescribed the organization and procedures for conducting air-ground operations. On assessment and on balance, these organizational prescriptions proved sound. In a letter to General Spaatz in May 1945, General Bradley praised the effectiveness of joint air-ground operations. Essential "joint planning at the appropriate command levels," he said, was obtained first by "the close physical association of headquarters and second by the operational linking up of ground and staff personnel in your various air

headquarters. The latter [innovation] is original within this theater and has thoroughly justified itself."³² One might differ with the 12th Army Group commander's claim to originality. The much maligned FM 31–35 (April 1942), *Aviation in Support of Ground Forces*, established the procedures and practices for air-ground operations that airmen first introduced in North Africa, and then further developed in the Italian theater. Yet no one could doubt the effectiveness of joint operations in the European theater, which stressed the collocation of air and ground headquarters, establishment of combined operations centers, and exchange of air and ground liaison officers within air and surface units.

Despite an almost obsessive concern for centralized control of air forces, Weyland and his colleagues permitted far more initiative and latitude for action at lower echelons than anyone could have foreseen. As he and his command demonstrated, operational decentralization became key to successful joint operations during the campaign. His separate headquarters elements were a case in point. So, too, was the coordination that evolved among forces in the field. The airmen realized, for example, that accurate and *timely* field intelligence required tactical reconnaissance pilots to communicate directly with the air liaison officers at corps and, sometimes, at division level without first communicating with the higher headquarters tactical control center. By the spring of 1945, Weyland's fighter-bomber pilots routinely monitored reconnaissance radio channels and reacted promptly to attack targets of opportunity. In such instances, the tactical control center often performed only a monitoring function.³³

During the final three months of the European war, fighter-bombers flying armed reconnaissance increasingly contacted corps or division headquarters to learn of any immediate targets before flying their assigned routes. Responses to the AAF Evaluation Board's questionnaire, however, indicated that not all air-ground teams followed this procedure; some followed it only occasionally. Third Army's XX Corps, for example, declared, regretfully, that this did not happen on their front, but General Walker's XX Corps staff might have responded to the board's questionnaire in March rather than in May, when the practice appeared to be more common throughout the XIX TAC-Third Army team.³⁴ Also, as the 6th Armored Division's response indicated, although armed reconnaissance flights might not check in with the corps or division, the daily reconnaissance program, whereby tactical reconnaissance pilots flew assigned routes for the different Army corps, made it possible for the pilots to obtain immediate air cooperation for the ground units. If the demands of mobile warfare predictably required flexible operational procedures at lower echelons, the commanders also resorted to these practices during static warfare in the fall and winter months.³⁵

By 1945, decentralized air-ground operations and procedures often provided local army units with what amounted to an air umbrella, one that air force

doctrine abhorred as a misuse of air power. Although air force representatives retained control of the air assets, army commanders often had essentially their own aircraft supporting their units in all but name. In such cases, the Allies' overwhelming air superiority and the growing weakness of German defenders made it increasingly possible to take liberties with doctrine in the name of better and more effective operations. The XIX TAC experience shows that this kind of air support provided to ground forces was directly proportional to the air resources available for that particular function. Unlike in North Africa, where relatively few resources translated into limited to modest air support, an abundance of resources in Northwest Europe at the end of 1944 enabled Allied air forces to provide formidable, if sometimes inconsistent, air support.

Two key technical developments during the war also contributed mightily to the success of tactical air operations. One was the appearance of the well-armored, long-range fighter-bomber as the primary aircraft for close air support. The other involved a revolution in communications that made efficient coordination, command, and control at all echelons possible. Effective air-ground procedures would hardly have been as successful without the timely arrival of the turbo-supercharged, air-cooled, radial engine, P–47 Thunderbolt fighter-bomber as the premier ground support aircraft in the European theater. Taking advantage of Allied air superiority in 1944, the P–47 made close air support far more effective than the authors of air force doctrine had imagined possible a year earlier. Without Allied air superiority in North Africa, not the P–39 Airacobra, the P–40 Warhawk, nor the A–20 Havoc light bomber proved capable of accurate, low-level bombing in Phase III operations without unacceptable losses.

By the time General Weyland arrived in England in early 1944, the AAF had three new candidates for the fighter-bomber role. The Thunderbolt was joined by the P-38 Lightning and the P-51 Mustang that mounted liquidcooled, in-line engines. All three models were initially developed as pursuit, or fighter, aircraft for air combat at altitude against opposing fighters. When airmen added racks to carry bombs and rockets, however, all three proved highly adaptable to the tactical bombing mission. Likewise, they usually bested enemy fighters even against considerable odds. Fortunately for Ninth Air Force, Eighth Air Force selected the more agile P-51, rather than the P-47 as its main fighter aircraft for bomber escort work. Despite the latter's good speed, range, bomb-carrying capacity, and firepower, authorities preferred the P-51 for Priority I fighter missions, and withdrew the P-38 from fighterbomber operations entirely. Both proved more vulnerable to flak at low altitudes because of the extensive radiator plumbing that served their liquidcooled engines. On the other hand, they performed superbly as reconnaissance planes and served as such throughout the campaign.³⁶

General Weyland's command preferred the rugged Thunderbolt unequivocally for fighter-bomber operations. Its sturdy frame, ease of mainte-

nance, and capacity to carry a large bomb or rocket load, combined with an aircooled, radial engine that could take a licking and still keep on running, made the P-47 the natural choice for close air support operations. Moreover, with or without bombs and rockets, eight wing-mounted .50-caliber machine guns gave to this flying engine of war enormous fire power in support of ground forces. In its report to the AAF Evaluation Board, the XIX TAC submitted a list of characteristics for the ideal fighter-bomber, which the board accepted without change. Confining itself to its experience in the European theater, the XIX TAC preferred the armament of the P–47, but it favored the more efficient performance capabilities of the P-51. Although not commenting on engine characteristics, the command no doubt favored the radial-type air-cooled engine that helped make the P–47 better able to withstand hits from enemy flak and continue flying. In light of German turbojet aircraft that had appeared in combat, however, it is surprising that the American airmen did not project beyond familiar, propeller-driven airplanes to include jet aircraft as they identified characteristics of their ideal fighter-bomber.³⁷

With the arrival of the P-47 and improved communications, close air support or Phase III missions could no longer be considered the most expensive, least effective, and most difficult to control. Equipped with external fuel tanks, fighter-bombers could also meet the range challenges of mobile warfare. Even so, General Weyland was quick to remind General Patton and his staff of the limitations of modern fighter-bombers. Despite the impressive technical performance, their pilots could not operate them effectively in bad weather or darkness. Army planners understood these problems. Nevertheless, if Patton's ground commanders always included air support in joint operational plans, they seldom postponed an offensive because weather conditions prohibited the fighter-bombers from flying. General Weyland frequently permitted pilots to violate weather minimums in declared emergencies, but not for sustained offensive drives. Third Army's XX and XII Corps assaults on the Siegfried Line in February 1945, for example, began without air cover in spite of strong enemy defenses and rugged terrain. Normally, Third Army offensives would not be rescheduled unless they required medium or heavy bombers. Even then, individual circumstances might convince the commander to move forward without air support since medium bombers required two days to schedule, or to reschedule. Army commanders widely criticized the Army Air Force's inability to provide medium bomber support on short notice.³⁸

Bad weather and darkness probably had a greater effect on fighter-bomber efforts to isolate the battlefield than they did on close air support operations. German troops invariably moved the bulk of their troops and supplies to and from the front lines during bad weather or after sundown, when Allied aircraft harassed them the least. Similarly, German transports could move at night almost at will because of the small Allied night fighter force. Although initially designed for night interception operations, the P–61 Black Widow

became a more effective fighter-bomber after acquiring napalm ordnance and rockets to complement its four 20-mm cannons in early 1945. Despite the limitations associated with the Black Widow's armed reconnaissance missions, however, the XIX TAC valued the twin-engine, humpbacked P–61, which presented a frightening presence at night, more for its effect on enemy morale and less for its bombing statistics. The command simply had too few P–61s. Except for the Ardennes emergency, Weyland's night fighter force never amounted to more than a single squadron of 12–15 Black Widows.³⁹

In its evaluation of air operations, the AAF Evaluation Board highlighted the weakness of Allied night flying efforts. In truth, that weakness had been painfully obvious to all from the beginning of the drive across France. "The absence of adequate night fighters and fighter-bombers," the report stated, "was found to be probably the most serious handicap to the air forces throughout the war." When taken together, bad weather and darkness gave the Germans a degree of freedom for movement and clearly enabled them to prolong the war.

A second major development involving technology offered the promise of overcoming the fighter-bomber's fundamental visibility problem when flying in poor weather and at night. Radio communications and the use of radar as an offensive weapon had progressed a long way in this direction by 1944. Together, they provided command and control of fighter-bombers and were basic in the first attempts to develop a capability to bomb accurately in close air support operations. General Weyland, for example, communicated directly with General Vandenberg at Ninth Air Force headquarters and other key officers over the Redline communications system. Four communications networks and five methods of communicating tied XIX TAC units together, even under conditions of extreme mobility. Good VHF radio equipment met the challenge of creating air-ground coordination. Also during the winter months, ground-based radar became increasingly important for accurate navigation and bombing of targets beyond the bomb safety line. Indeed, any useful flying at night and during winter would have been impossible without these developments.

In this area, too, limitations affected the impressive capabilities of new technology. Allied forces turned to the scientists and engineers of the operational research offices at the various command levels for solutions to overcome technical constraints. By early 1945, the XIX TAC had become deeply involved in this research, which included methods to improve aircraft control procedures and determine optimum bomb size and fuze types, in addition to the study of bridge destruction by aircraft. The most attention, however, focused on producing an effective bomb strike camera and the accurate blind bombing radar system, SCR–584.

Despite major efforts throughout the spring of 1945, improvements in both systems fell short of hopes. The SCR-584 blind bombing system and bomb strike camera projects serve as valuable reminders that, wherever new

technology is involved, initial expectations often go unfulfilled. Such overestimation of technical potentials would become commonplace in a later age. Altogether, Allied scientists did far better than their Axis counterparts in recognizing the potential of such systems and working to make them fulfill their promise. Moreover, though the war proved to be a catalyst for advances in technology, radar and radio communications were still in their infancy. Solutions for blind bombing and bomb damage assessment would have to await more sophisticated technical developments that lay farther in the future than most supposed.

Cooperation was the final ingredient that contributed to the success of tactical air-ground operations. Cooperation, not confrontation, characterized army and air force relations in Northwest Europe far more than anyone could have imagined during the difficult days in North Africa in late 1942. Ninth Air Force analysts at war's end correctly assessed the effectiveness of the airground team at the army-tactical air command level. "The principle of establishing a separate, autonomous tactical air command to operate in an indissoluble operational partnership with each army proved sound and successful in combat."41 Although no one would deny the importance of doctrine, in large part the personal element proved crucial. In his letter to General Spaatz, General Bradley concluded by emphasizing this most important factor. "I think that one of the most effective measures to insure good cooperation," he said, "has been the excellent personal relationship between air and ground commanders which we have enjoyed during this campaign and which has been highly gratifying to me."42 He certainly had in mind the excellent personal rapport he developed with air colleagues in joint headquarters, first with General Quesada, then with General Vandenberg. Cooperation and trust, together with an abundance of airplanes, served to diminish the importance of organizational principles and mission priorities.

The air-ground partnership reflected both personal and professional considerations. The team of Patton and Weyland, perhaps more than any other, illustrated the professional respect and understanding that proved absolutely vital for good air-ground relations. It would be difficult to imagine two such different personalities: the flamboyant, theatrical, implacable "man of destiny" from California, and the soft-spoken but determined Texan. Colonel Ferguson, XIX TAC operations officer, recounted later that General Weyland made sure well before the Normandy invasion that the two commanders understood each other and the capabilities and limitations of their forces. "There was such good rapport established early on about what one could and could not do that there were no serious difficulties." As a one-star, Weyland remained the responsible subordinate rather than a coequal commander envisioned in FM 100–20. Regardless, he had the three-star army commander's confidence from the beginning. He could always call on Patton to help convince higher headquarters to provide additional air units or change target priorities, and Patton would

do so, vigorously. Furthermore, Patton was never known to override General Weyland when, on occasion, his air commander declined to have fighter-bombers attack targets he judged unsuitable.

Above all, Patton knew that he could count on the XIX TAC commander to support Third Army efforts to the maximum. Apparently, for others, that kind of aerial support could be considered excessive at times. Looking back on the air-ground experience of World War II from another perch, Ninth Air Force officials warned future tactical airmen:

[It] was demonstrated repeatedly that the commander of a tactical air command, deeply engrossed in and intimately associated with the ground campaign, is subject to many strong influences to insure the maximum amount of close air cooperation in his area of responsibility at the possible expense of the proper employment of the air force as a whole in the combined air and ground battle.⁴⁴

Although the evaluators did not name General Weyland's XIX TAC in this instance, they doubtless knew that Third Army received more close air support sorties than had been provided to the First and Ninth Armies by the other two tactical air commands in Ninth Air Force. Moreover, General Patton's reputation as a strong leader might have suggested to them that he had ridden roughshod over his air commander to extract so much close air support for his forces.

This was not the case. General Weyland always spoke for air interests whenever he thought necessary. General Patton, on his part, did not interfere in the overall air plan, and he let the air commander run the air side of operations. He backstopped Weyland and supported his requests at higher head-quarters, knowing full well that in return he would receive all possible aerial support, given the vagaries of weather and other priorities. Throughout the campaign Patton publicized the air-ground team's performance at every opportunity. Although comparatively obscure, one reference in particular captures the confidence he had in his air commander's determination to support the Third Army. On January 15, 1945, with the Germans in full retreat from the Bulge, he wrote to his wife, "we have had three nice clear days and hope that our air has done half as much as it says. However, they do try, especially Weyland and his fighter-bombers."

Following the campaign, the two former comrades-in-arms corresponded several times before Patton's death in December 1945. In September, Patton sent the first three chapters of his manuscript, *War As I Knew It*, to a dispirited Weyland, who after his European exploits, instead of receiving an operational assignment, had been named Assistant Commandant of the Army's Command and General Staff School. In reply to Weyland's letter of thanks,

Patton told him that the students would benefit enormously from his experience "because I am sure that now everyone realizes that the phenomenal success of the combined operations of the XIX TAC and Third Army was due primarily to your forethought and breadth of understanding." Offering further encouragement and perhaps the greatest possible compliment, Patton wrote, "As you know, I told General Eisenhower during the campaign that I would be perfectly happy to have you as a Corps Commander, at any time." 46

At the end of the war Allied leaders did seek to preserve the lessons learned in the cooperative air-ground effort. Yet they faced the formidable challenge of somehow institutionalizing the unusual personal and professional relationships that often proved so successful. In later years, once the experience levels declined and professional relationships forged in combat disappeared, it would prove difficult to rely only on a shared wartime background. Eisenhower, SHAEF Commander and a strong proponent of air-ground cooperation and centralized control of air power, took the first steps in May 1945, when he convened a meeting among commanders of the key air-ground teams in the European theater at General Bradley's headquarters. General Weyland recalled that the group unanimously reaffirmed centralized control of air power as prescribed by FM 100–20 (1943), but not before General Hodges, U.S. First Army commander, proposed that the individual army headquarters be authorized direct control of all reconnaissance aircraft.⁴⁷

The reports from army field units made it clear that General Hodges's suggestion would be welcome in some Army circles. Weyland found this expression of sentiment familiar. Both he and General Vandenberg spoke out forcefully against Hodges's plan, and they were supported strongly by General Weyland's "collaborator," General Patton. As Weyland remembered the incident, the Third Army commander explained to those assembled that although his intelligence officer had first favored Third Army control of reconnaissance, he realized that reconnaissance had other responsibilities, in addition to those for his army. Weyland recalled, "Old Patton was a believer." 48

Eisenhower and his colleagues had good reason for concern about preserving the lessons of tactical air power. In the European theater, individual army commanders had long expressed reservations about command and control arrangements for tactical air forces. Many remained convinced that the U.S. Army needed its own air force and would in the future continue to advocate a strong army air arm. Normally, these officers held command positions below corps level, where they would be less likely to appreciate air power's larger responsibilities. Moreover, while Eisenhower and his commanders met at Luxembourg City, Army Ground Forces headquarters published a preliminary report compiled by its Equipment Review Board under the chairmanship of Maj. Gen. Gilbert R. Cook. Army Air Forces leaders became alarmed as soon as they learned that its conclusions entirely opposed the precepts of FM 100–20 and the air-ground experience in Europe. 49 The so-called Cook Board

report recommended that the army have "ground support aviation organic to and operated by ground forces...," and that the aircraft procured for this purpose be of the "flying artillery and flying tank type" for exclusive support of ground forces.

Characteristically, air leaders mobilized to refute the findings of the Cook Board. In response to their expressions of concern, the War Department established a committee, with air force representation, to gather information pertaining to the Cook Board's findings. After the committee completed its investigation in the fall, the War Department convened an Equipment Board in December 1945, under the chairmanship of Gen. Joseph W. Stilwell, to hear testimony from key air and ground forces officers. General Weyland was among those airmen called to testify in December. Like his colleagues, he had access to the records at AAF headquarters in Washington and at the AAF Tactical Center's library at Orlando, Florida, before appearing for a "coordinating rehearsal" of all air force testimony. Weyland's views reflected his own experience and partnership in the most successful air-ground team of the war. In response to the report's view that there must be one team with one commander, Weyland affirmed the AAF's view that the theater commander is the single commander. Moreover, "all offensive combat aircraft must be under unified air control to permit flexibility of employment." He referred to his own interview with German Field Marshal von Rundstedt, who had agreed that aircraft dispersed to corps and divisions could never be concentrated to support one corps or an army at the expense of another. As for the army's "flying tank," he argued that this represented nothing more than the kind of divebomber that had been shot out of the sky and abandoned in Europe. The fighter-bomber had been developed to meet Army needs, he declared, and it was "found by actual experience to be better than the slow planes especially designed for army support." Any aircraft designed for a single purpose loses flexibility that is essential for successful air operations. He also cited the experience of the Third Army–XIX TAC team as an example of how army support could be attained and maintained. Moreover, on the sensitive issue of air force interest in flying close air support, he asserted that U.S. Army ground forces had "misinterpreted" the meaning of "third priority." Despite the implications of formal tactical air doctrine, close air support should not be considered third in importance, but must follow air superiority and interdiction missions so that ground forces "enter [the] battle with hope of success without disproportionate losses."50

The War Department's own Equipment Review Board eventually decided against the Cook Board's recommendations. Instrumental in its decision, General Eisenhower and key army and corps commanders supported AAF's views. They agreed that air-ground support in Europe had been more than sufficient to defeat the Germans without a "duplicate air organization for ground cooperation." While the War Department considered the merits of views pre-

sented by the army ground forces, its evaluation boards completed their studies of air power's impact in the various theaters. These studies also confirmed the essential importance of joint operations and cooperation between air and ground forces, and they recommended that the doctrine and procedures that had proved so successful be updated accordingly.

General Arnold directed the AAF Evaluation Board to revise FM 31–35 to incorporate the lessons of World War II. The new manual updated sections of the 1942 version, *Aviation in Support of Ground Forces*, and incorporated



Field Marshal von Rundstedt (right) reviews his troops.

portions of FM 100–20, *Command and Employment of Air Power*, which the War Department chose not to rescind. The new manual, however, did not have FM 100–20's stridency; in fact, the authors gave to the revised manual a new, more neutral title, *Air-Ground Operations*. Headquarters Army Ground Forces now was commanded by General Devers, an experienced veteran of the European theater and sympathetic supporter of air-ground cooperation. Indeed, the new manual received swift approval from the War Department and both headquarters, and it was published in August 1946.⁵²

Yet would a revised manual and sound doctrine be sufficient to preserve the lessons of air-ground cooperation of World War II in the absence of goodwill? To be sure, in the postwar period of rapid and massive demobilization goodwill did not prevail in the competition for declining budgets, lobbying for an independent Air Force, and a growing emphasis on the strategic nuclear mission to confront the Soviet Union in the Cold War. In later years interservice rivalry among military leaders would lead to precisely the kind of aerial duplication that other leaders in the euphoria of victory after the Second World War argued against. The future would see separate tactical aviation organizations grow and evolve in the U.S. Army, Navy, and Marine Corps, in addition to the Air Force.⁵³

General Bradley called the victory in Europe a victory for combined arms and joint operations. Though correct, command of the air proved the key to the campaign. In a sense, everything else flowed from the fundamental fact that the Allies achieved and maintained air superiority and their enemy had not. General Weyland realized this as much as any airman. A few years later, when he assumed command of Far Eastern Air Forces and directed air operations in Korea, few could match his level of tactical air experience and competence. Yet even Allied air superiority and his impressive background in tactical aviation did not guarantee effective air-ground operations. In fact, Weyland faced enormous problems in coordinating air-ground operations and centralizing control of the Air Force, Navy, and Marine air. At the same time, he struggled to convince the U.S. Army to abandon a traditional view that it should control its own air forces. As Weyland's official report on the war observed, "an astounding facet of the Korean War was the number of old lessons that had to be relearned."54 That same refrain would be repeated during the Vietnam War.

The lesson, of course, is that air superiority by itself does not ensure either centralized control of air assets by airmen or a proper balance between interdiction and close air support efforts. Although doctrine may serve well in principle, no air-ground program can succeed without the cooperation and goodwill of air and ground commanders and their staffs. Given sufficient resources, people who will work together toward a commonly shared goal can turn theory into effective practice. Assessing a later war, General Quesada put it succinctly: "You can have all the doctrine you want, but unless you have

people, commanders, to implement those doctrines, you might as well throw your doctrines away."⁵⁵ Generals Weyland and Patton knew this. Theirs was a partnership founded on mutual trust, respect, and a common mission-directed interest. That is *the* basic lesson from the Second World War for tactical air power. It is a lesson worth remembering.